REMARKS

Claim 20 has been amended for purposes of clarification. Claim 1 has been canceled without prejudice. Applicant reserves the right to pursue the subject matter of claim 1 in any related applications. Thus, upon entry of the above amendments, Claims 19-51 will be pending. A copy of all pending claims is attached hereto as Exhibit A.

Restriction Requirement Under 35 U.S.C. § 121

The Examiner has required an election under 35 U.S.C. § 121 of one of the following inventions:

I. Claim 1, drawn to a method of inhibiting tumor cell proliferation, classified in class 424, subclass 193.1;

II. Claims 19 and 22-31, drawn to a population of proteins, classified in class 530, subclass 350;

III. Claims 20-21, 32-38, and 50-51, drawn to a purified peptide (understood to mean one species made up by one molecular structure), classified in class 530, subclass 350; and

IV. Claims 40-49, drawn to a method of making a composition, classified in class 436, subclass 177.

The Examiner contends that each of Groups I-IV are distinct from the other Groups.

Preliminarily, Applicant submits that the invention of Group II, claims 19 and 22-31 are drawn to a population of peptides. Applicant also points out that claim 39 has not been assigned a group and should be in Group IV. Applicant has canceled claim 1 without prejudice.

In response to the Examiner's restriction requirement, Applicant hereby provisionally elects the invention of Group II, claims 19 and 22-31 directed to a population of peptides, classified in class 530, subclass 350, with traverse.

With respect to the division of the application into four groups of claims, Applicant respectfully traverses the restriction requirement. Specifically, Applicant requests a modification of the requirement so that Groups II (Claims 19, 22-31) and III (Claims 20-21, 32-38, and 50-51) be combined, and examined together in the instant application. For the

reasons which are detailed below, the subject matter of these claims merits examination in a single application.

Group II relates to a population of peptides from non-covalently associated stress protein-peptide complexes from mammalian tumor cells. Specifically, Group II relates to a composition comprising a purified population of peptides. Group III relates to a purified peptide that is characterized as being present as a non-covalent complex with a stress protein in a mammalian tumor cell or consisting of the amino acid sequence of said peptide.

Applicant submits that a search for art relevant to any one group, *e.g.*, Group II, would necessarily overlap and identify art relevant to Group III.

Accordingly, Applicant submit that to search the subject matter of Groups II and III together would not be a serious burden on the Examiner. Even assuming *arguendo* that the two groups of claims were to be considered distinct inventions, Applicant asserts that, pursuant to M.P.E.P. § 803, the subject matter of Claims 19-38 and 50-51 can be examined together in a single application without imposing a serious burden to the Examiner. The M.P.E.P. § 803 (Eighth Edition, August 1, 2001) states:

> If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to distinct or independent inventions.

Moreover, Applicant respectfully points out that the subject matter of Groups II and III is in the same class and subclass. Thus, in view of M.P.E.P. § 803, Groups II and III should be examined together, since such would not be a "serious burden" on the Examiner.

Applicant respectfully requests the Examiner to place claims 19-38 and 50-51 within a single group.

Attorneys for Applicant retain the right to petition from the restriction requirement under 37 C.F.R. § 1.144.

CONCLUSION

Applicant respectfully requests that the present amendments and remarks be made of record in the instant application. An early allowance of the application is earnestly requested. If any issues remain in connection herewith, the Examiner is respectfully invited to telephone the undersigned to discuss the same.

Respectfully submitted,

Adriane M. Antler Reg. No. 31,232

By Geraldine Flaws Bard

Date: January 14, 2002 32,605

Adriane M. Antler (Reg. No.)
PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(212) 790-9090

OIPE
JAN 14 2002
PATENT & TRADEMARK OFFICE
JC116

APPENDIX A

MARKED VERSION OF THE CLAIMS

U.S. PATENT APPLICATION SERIAL NO. 09/657,722

19. A composition comprising an amount of a purified population of peptides, wherein said purified population of peptides is produced by a method comprising the steps of:

a) purifying a population of non-covalently associated stress protein-peptide complexes from mammalian tumor cells;

b) releasing the peptides from said population of complexes; and

c) recovering the released population of peptides.

20. A purified peptide that is characterized as being present as a non-covalent complex with a stress protein in a mammalian tumor cell.

21. A purified peptide consisting of the amino acid sequence of a peptide that is present as a non-covalent complex with a stress protein in a mammalian tumor cell.

22. The composition of claim 19 further comprising a cytokine.

23. The composition of claim 22 wherein said cytokine is selected from the group consisting of IL-1α, IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IFNα, IFNβ, IFNγ, TNF∝, TNFβ, G-CSF, GM-CSF, and TGF-β.

24. The composition of claim 19 wherein the peptides are released from said population of complexes by a method comprising placing said population of complexes in the presence of adenosine triphosphate, low pH, or both.

25. The composition of claim 19, wherein said mammalian tumor cells are human cells.

26. The composition of claim 19 wherein said mammalian tumor cells are from a tumor selected from the group consisting of melanocarcinoma, hepatocarcinoma, and renal cell carcinoma.

27. The composition of claim 19 wherein said tumor cells are from a metastasis.

28. The composition of claim 19, wherein said tumor cells have been proliferated in vivo.

29. The composition of claim 19, wherein said tumor cells have been proliferated in vitro.

30. The composition of claim 19, wherein the stress protein is a member of a stress protein family selected from the group consisting of hsp60, hsp70, and hsp90.

31. The composition of claim 19, wherein the stress protein is gp96.

32. The peptide of claim 20 or 21, wherein said mammalian tumor cell is a human cell.

33. The peptide of claim 20 or 21 wherein said mammalian tumor cell is from a tumor selected from the group consisting of melanocarcinoma, hepatocarcinoma, and renal cell carcinoma.

34. The peptide of claim 20 or 21, wherein said tumor cell is from a metastasis.

35. The peptide of claim 20, wherein said tumor cell has been proliferated in vivo.

36. The peptide of claim 21, wherein said tumor cell has been proliferated in vitro.

37. The peptide of claim 20 or 21, wherein the stress protein is a member of a stress protein family selected from the group consisting of hsp60, hsp70, and hsp90.

38. The peptide of claim 20 or 21, wherein the stress protein is gp96.

39. A method of making a composition comprising a population of peptides comprising:

a) purifying a population of stress protein-peptide complexes from mammalian tumor cells;

b) releasing a population of peptides from said population of complexes; and

c) recovering the released population of peptides.

40. A method of making a purified peptide comprising:

a) purifying a population of stress protein-peptide complexes from mammalian tumor cells;

b) releasing a population of peptides from said population of complexes; and

c) purifying a peptide from the released population of peptides.

41. The method of claim 39 wherein the peptides are released from said population of complexes by a method comprising placing said population of complexes in the presence of adenosine triphosphate, low pH, or both.

42. The method of claim 40 wherein the peptides are released from said population of complexes by a method comprising placing said population of complexes in the presence of adenosine triphosphate, low pH, or both.

43. The method of claim 39 or 40 wherein said mammalian tumor cells are human cells.

44. The method of claim 39 or 40, wherein said mammalian tumor cells are from a tumor selected from the group consisting of melanocarcinoma, hepatocarcinoma, and renal cell carcinoma.

45. The method of claim 39 or 40, wherein said mammalian tumor cells are from a metastasis.

46. The method of claim 39 or 40, wherein said mammalian tumor cells have been proliferated in vitro.

47. The method of claim 39 or 40, wherein said mammalian tumor cells have been proliferated in vivo.

48. The method of claim 39 or 40, wherein the stress protein is a member of a stress protein family selected from the group consisting of hsp60, hsp70, and hsp90.

49. The method of claim 39 or 40, wherein the stress protein is gp96.

50. A composition comprising the purified peptide of claim 20 or 21 and a cytokine.

51. The composition of claim 50 wherein said cytokine is selected from the group consisting of IL-1α, IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IFNα, IFNβ, IFNγ, TNF∝, TNFβ, G-CSF, GM-CSF, and TGF-β.

OIPE
JAN 14 2002
PATENT & TRADEMARK OFFICE

APPENDIX B
PENDING CLAIMS
U.S. PATENT APPLICATION SERIAL NO. 09/657,722

19. A composition comprising an amount of a purified population of peptides, wherein said purified population of peptides is produced by a method comprising the steps of:

a) purifying a population of non-covalently associated stress protein-peptide complexes from mammalian tumor cells;

b) releasing the peptides from said population of complexes; and

c) recovering the released population of peptides.

20. A purified peptide that is characterized as being present as a non-covalent complex with a stress protein in a mammalian tumor cell.

21. A purified peptide consisting of the amino acid sequence of a peptide that is present as a non-covalent complex with a stress protein in a mammalian tumor cell.

22. The composition of claim 19 further comprising a cytokine.

23. The composition of claim 22 wherein said cytokine is selected from the group consisting of IL-1α, IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IFNα, IFNβ, IFNγ, TNF∝, TNFβ, G-CSF, GM-CSF, and TGF-β.

24. The composition of claim 19 wherein the peptides are released from said population of complexes by a method comprising placing said population of complexes in the presence of adenosine triphosphate, low pH, or both.

25. The composition of claim 19, wherein said mammalian tumor cells are human cells.

26. The composition of claim 19 wherein said mammalian tumor cells are from a tumor selected from the group consisting of melanocarcinoma, hepatocarcinoma, and renal cell carcinoma.

27. The composition of claim 19 wherein said tumor cells are from a metastasis.

28. The composition of claim 19, wherein said tumor cells have been proliferated in vivo.

29. The composition of claim 19, wherein said tumor cells have been proliferated in vitro.

30. The composition of claim 19, wherein the stress protein is a member of a stress protein family selected from the group consisting of hsp60, hsp70, and hsp90.

31. The composition of claim 19, wherein the stress protein is gp96.

32. The peptide of claim 20 or 21, wherein said mammalian tumor cell is a human cell.

33. The peptide of claim 20 or 21 wherein said mammalian tumor cell is from a tumor selected from the group consisting of melanocarcinoma, hepatocarcinoma, and renal cell carcinoma.

34. The peptide of claim 20 or 21, wherein said tumor cell is from a metastasis.

35. The peptide of claim 20, wherein said tumor cell has been proliferated in vivo.

36. The peptide of claim 21, wherein said tumor cell has been proliferated in vitro.

37. The peptide of claim 20 or 21, wherein the stress protein is a member of a stress protein family selected from the group consisting of hsp60, hsp70, and hsp90.

38. The peptide of claim 20 or 21, wherein the stress protein is gp96.

39. A method of making a composition comprising a population of peptides comprising:

a) purifying a population of stress protein-peptide complexes from mammalian tumor cells;

b) releasing a population of peptides from said population of complexes; and

c) recovering the released population of peptides.

40. A method of making a purified peptide comprising:

a) purifying a population of stress protein-peptide complexes from mammalian tumor cells;

b) releasing a population of peptides from said population of complexes; and

c) purifying a peptide from the released population of peptides.

41. The method of claim 39 wherein the peptides are released from said population of complexes by a method comprising placing said population of complexes in the presence of adenosine triphosphate, low pH, or both.

42. The method of claim 40 wherein the peptides are released from said population of complexes by a method comprising placing said population of complexes in the presence of adenosine triphosphate, low pH, or both.

43. The method of claim 39 or 40 wherein said mammalian tumor cells are human cells.

44. The method of claim 39 or 40, wherein said mammalian tumor cells are from a tumor selected from the group consisting of melanocarcinoma, hepatocarcinoma, and renal cell carcinoma.

45. The method of claim 39 or 40, wherein said mammalian tumor cells are from a metastasis.

46. The method of claim 39 or 40, wherein said mammalian tumor cells have been proliferated in vitro.

47. The method of claim 39 or 40, wherein said mammalian tumor cells have been proliferated in vivo.

48. The method of claim 39 or 40, wherein the stress protein is a member of a stress protein family selected from the group consisting of hsp60, hsp70, and hsp90.

49. The method of claim 39 or 40, wherein the stress protein is gp96.

50. A composition comprising the purified peptide of claim 20 or 21 and a cytokine.

51. The composition of claim 50 wherein said cytokine is selected from the group consisting of IL-1α, IL-1β, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IFNα, IFNβ, IFNγ, TNF∝, TNFβ, G-CSF, GM-CSF, and TGF-β.